(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host cow such that the reconstructed embryo develops to term.

53 (New). The method of claim 52, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

54 (New). The method of claim 52 or 53, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

55 (New). The method of claim 52 or 53, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

56 (New). A method of cloning a bovine fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid bovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested bovine oocyte to reconstruct an embryo;

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(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host cow such that the reconstructed embryo develops into a fetus.

57 (New). The method of claim 56, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

58 (New). The method of claim 56 or 57, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

59 (New). The method of claim 56 or 57, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

60 (New). A method of cloning a sheep by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid ovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested ovine oocyte to reconstruct an embryo;

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(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed, diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host sheep such that the reconstructed embryo develops to term.

61 (New). The method of claim 60, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

62 (New). The method of claim 60 or 61, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

63 (New). The method of claim 60 or 61, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

64 (New). A method of cloning a ovine fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid ovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested ovine oocyte to reconstruct an embryo;

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(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed, diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host sheep such that the reconstructed embryo develops into a fetus.

65 (New). The method of claim 64, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

66 (New). The method of claim 64 or 65, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

67 (New). The method of claim 64 or 65, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

68 (New). A method of cloning an non-human mammal by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid non-human mammalian fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a

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sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant diploid reconstructed embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops to term.

69 (New). The method of claim 68, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

70 (New). The method of claim 68 or 69, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

71 (New). The method of claim 68 or 69, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

72 (New). A method of cloning a non-human mammalian fetus by nuclear transfer comprising:

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(i) inserting a nucleus of a cultured diploid non-human mammalian fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops into a fetus.

73 (New). The method of claim 72, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

74 (New). The method of claim 72 or 73, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

75 (New). The method of claim 72 or 73, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

76 (New). A method of cloning a non-human mammal by nuclear transfer comprising:

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(i) inserting a nucleus of a cultured diploid non-human mammalian differentiated cell in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops to term.

77 (New). The method of claim 76, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

78 (New). The method of claim 76 or 77, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

79 (New). The method of claim 76 or 77, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

80 (New). A method of cloning a non-human mammalian fetus by nuclear transfer comprising:

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(i) inserting a nucleus of a cultured diploid non-human mammalian differentiated cell in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops into a fetus

81 (New). The method of claim 80, wherein said step of activating the resultant reconstructed diploid embryo comprises activating the embryo with a DC pulse.

82 (New). The method of claim 80 or 81, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vitro*.

83 (New). The method of claim 80 or 81, wherein said step of culturing said activated, reconstructed, diploid embryo to blastocyst is performed *in vivo*.

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84 (New). A method of cloning a pig by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid porcine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested porcine oocyte to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed diploid embryo;

(iv) culturing said activated, reconstructed, diploid embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host pig such that the reconstructed embryo develops to term.--

REMARKS

Claims 52-84 are being added to the application in connection with a responsive motion filed by the party Campbell et al. in Interference No. 104,809.

Claims 52-84 are similar to pending claims 19-51. The claims differ in that the new claims make it clearer that the reconstructed embryo obtained after nuclear transfer is "diploid". For example, in claim 52, step (iii) has been amended to indicate that the resultant "diploid" reconstructed embryo is activated. Step (iv) now recites culturing said activated, reconstructed, "diploid" embryo to blastocyst. Similar language has been used in claims 53-84.

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